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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

FLEURANTIN, JEAN B

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/838,268

Applicant(s)

EBATA, JUN

Examiner

Jean B Fleurantin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Claims 11 and 12 are added.

Claims 1-12 remain pending for examination. Examiner discusses the limitations of claims 11 and 12 in the following rejection.

Response to Applicant's Remarks

2. Applicant's arguments filed on August 22, 2003 with respect to claims 1-12 have been considered but are not persuasive because of the following:

Claim Rejections - 35 USC § 103

- A. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Universal Service-Providers for Database Private Information Retrieval" issued by Di-Crescenzo et al., (hereinafter "Di-Crescenzo"). Submitted by the Applicant.

As per claims 1 and 7, Di-Crescenzo discloses a method which uses a plurality of document schemas to manage a document retrieval request, the document schemas defining a

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structure of document contents, each document schema including a plurality of attributes, (see page 2, lines 20-25), 'the method comprising the steps of assigning a schema identifier to each of the plurality of document schemas by generating a global unique identifier value every time a schema name of a new document schema is input' as a sufficiently large coalition of servers may be granted the legal right to recover the user's retrieval index, given a transcript of the user's query, in our (m-1) private m-server schemes a coalition of all servers with a database is required to reveal the user's index, (page 3, lines 31-34). Di-Crescenzo does not explicitly disclose assigning an attribute identifier to each of the plurality of attribute of one of the plurality of document schemas by generating another global unique identifier value. However, Di-Crescenzo discloses the transformation from the original data string x to the virtual data string x' corresponds to an 'oblivious shift' of x by a random amount r_1 , which is known to the user s_1 but is unknown to the database and s_2 , indeed each record of x' may be viewed as an encoding according to p_1 of a corresponding shifted record from x , (see page. 10, lines 19-22), and page 5, lines 20-23. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify assigning an attribute identifier to each of the plurality of attribute of one of the plurality of document schemas by generating another global unique identifier value as taught by Di-Crescenzo. Such modification would allow the teachings of Di-Crescenzo to provide user to retrieve information from database in such way that the database does not get any information about the user's query, (see page 1, lines 28-31).

As per claims 2 and 8, Di-Crescenzo discloses, "a document management method further comprises the steps of determining whether the attribute of a changed document schema include

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an attribute ID that is common to a non-changed document schema, through comparison between the attribute identifier of both the changed document schema and the non-changed document schema” as the transformation from the original data string x to the virtual data string x' corresponds to an ‘oblivious shift’ of x by a random amount r_1 , which is known to the user s_1 but is unknown to the database and s_2 , (see page 10, lines 19-21); and

“replacing the attributes of the non-changed document schema with the attributes of the changed document schema having the common attribute identifier” as a means for using the database’s answer on the shifted data string and the trapdoor information supplied by the server, the user can efficiently reconstruct the desired data record, (see page 9, lines 23-25).

As per claims 3 and 9, Di-Crescenzo discloses, “a document management method, wherein the plurality of document schemas are contained in a document schema file, the document schema file being stored into a first document management system and containing the schema identifier for each of the document schemas and the attribute identifier for each of the attributes of one of the document schemas” (see page 24, lines 17-19), “and the document schema file capable of being stored into a second document management system” as there is a user with private input ‘address’ i and one or more databases holding copies of an n -bit data string x , (see page 2, lines 5-6).

As per claims 4 and 10, Di-Crescenzo discloses the claimed subject matter except the claimed “wherein, in assigning the schema identifier, a global unique identifier value is received as a new schema identifier from an external system via a network and the new schema identifier

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is assigned to one of the plurality of document schemas.” However, Di-Crescenzo discloses the transformation from the original data string x to the virtual data string x' corresponds to an ‘oblivious shift’ of x by a random amount r_1 , which is known to the user s_1 but is unknown to the database and s_2 , indeed each record of x' may be viewed as an encoding according to p_1 of a corresponding shifted record from x ; which is readable as assigning an attribute identifier to each of the plurality of attribute of one of the plurality of document schemas by generating another global unique identifier value, (see page. 10, lines 19-22). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify assigning an attribute identifier to each of the plurality of attribute of one of the plurality of document schemas by generating another global unique identifier value as taught by Di-Crescenzo. Such modification would allow the teachings of Di-Crescenzo to provide user to retrieve information from database in such way that the database does not get any information about the user’s query, (see page 1, lines 28-31).

As per claim 5, Di-Crescenzo discloses, “a document management method, wherein, when a query condition is input, the document management method carries out a query conversation process for the input query condition, the query conversion process comprising the steps of reading a schema identifier, which correspond to one of schema names in the query condition, from a related one of the plurality of document schemas” as read operation for the commodity scheme can be obtained from the original read operation as in atomic commodity PIR schemes, (see page 25, lines 9-10). Further, in page 5, lines 20-25, Di-Crescenzo discloses

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the user sends a query to each database and receives an answer in return at the end of the interaction, the user applies some reconstruction function to the answers; and

“replacing each of the schema names in the query condition with the schema identifier” as the user sends a query as in the scheme for single-bit records, each database answers the user’s query l times once under each n -bit data string x , and the user applies the original reconstruction function l times once for each answer, (see page 7, lines 37-40).

As per claim 6, in addition to the discussion in claim 5, Di-Crescenzo further discloses “determining whether one of attribute names included in the query condition is a common attribute shared by the plurality documents schemas” as the user sends a query to each database and receives an answer in return at the end of the interaction, the user applies some reconstruction function to the answers, (see page 5, lines 20-35).

As per claims 11 and 12, in addition to the discussion in claim 1, Di-Crescenzo further discloses “the plurality of document schemas defining a structure of document contents to manage a document retrieval request, each of the plurality of document schemas including a plurality of attributes” as a private information retrieval request to a random database position r can be used to prepare “generic” question for databases which later on can be very cheaply converted by a user into his own arbitrary desired retrieval position I , we then introduce a new technique for combining these generic commodities both in the single database and the multiple database setting, (see page 4, lines 28-33), and page 7, lines 35-39.

Remarks

B. In response to applicant's argument on page 8, that the Di-Crescenzo et al. do not disclose "assigning an attribute identifier to each of the plurality of attribute of one of the plurality of document schemas by generating another global unique identifier value." It is respectfully submitted that Di-Crescenzo does not explicitly disclose assigning an attribute identifier to each of the plurality of attribute of one of the plurality of document schemas by generating another global unique identifier value. However, Di-Crescenzo discloses the transformation from the original data string x to the virtual data string x' corresponds to an 'oblivious shift' of x by a random amount r_1 , which is known to the user s_1 but is unknown to the database and s_2 , each record of x' may be viewed as an encoding according to p_1 of a corresponding shifted record from x , (see page. 10, lines 19-22), and page 5, lines 20-23. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify assigning an attribute identifier to each of the plurality of attribute of one of the plurality of document schemas by generating another global unique identifier value as taught by Di-Crescenzo. Such modification would allow the teachings of Di-Crescenzo to improve the accuracy of the document management method and computer-readable storage medium storing program code for executing the same, and to provide user to retrieve information from database in such way that the database does not get any information about the user's query, (see page 1, lines 28-31). Therefore, the rejection in last Office Action is maintained.

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Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Contact Information

4. Any inquiry concerning this communication from examiner should be directed to Jean Bolte Fleurantin at (703) 308-6718. The examiner can normally be reached on Monday through Friday from 7:30 A.M. to 6:00 P.M.

If any attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Mrs. KIM VU can be reached at (703) 305-8449. The FAX phone numbers for the Group 2100 Customer Service Center are: **After Final (703) 746-7238, Official (703) 746-7239, and Non-Official (703) 746-7240.** NOTE: Documents transmitted by facsimile will be entered as official documents on the file wrapper unless clearly marked "**DRAFT**".


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2100 Customer Service Center receptionist whose telephone numbers are (703) 306-5631, (703) 306-5632, (703) 306-5633.



Jean Bolte Fleurantin

2003-11-10

JBF/



**SHAHID ALAM
PRIMARY EXAMINER**